# 1.0 Purpose of and Need for Action

## 1.1 Background

### 1.1.1 The Forest Highway Program

The Forest Highway Program (FHP) is administered separately in each state by a three-agency cooperative known as the Program Agencies. The function of the Program Agencies is to maintain a continuing FHP and to make major decisions concerning projects in the program. The Program Agencies for California are the FHWA, the USFS, and the California Department of Transportation (Caltrans). Under an agreement between the Program Agencies, the FHWA is the federal lead agency responsible for the federal environmental process. The FHWA is also responsible for project design and construction contract administration. Trinity County is the local lead agency responsible for the state environmental process under CEQA.

Highways designated for improvements under the FHP are selected at an annual California Public Lands Highway Program Agency meeting. The routes selected are those that serve both the National Forests and the State (or counties) and that exhibit the greatest need for improvement. Hyampom Road was officially placed in the FHP at the 2001 programming meeting.

### 1.1.2 Existing Roadway

The Trinity County Department of Transportation (TCDOT) maintains Hyampom Road (also known as Trinity County Road 301) through a United States Department of Transportation (USDOT) Highway Easement Deed from the USFS. Hyampom Road functions as a rural major collector highway, primarily serving the towns of Hayfork and Hyampom. Although other routes serve the town of Hayfork, Hyampom Road provides the only year-round access to the community of Hyampom. Hyampom Road also serves and is surrounded on both sides by Shasta-Trinity National Forest (STNF) lands. Segments 2 through 5 are within the National Forest Boundary (Figure 1). Within the forest boundary, the existing USDOT access easement is 20 meters (m) (66 feet [ft.]) on each side of the centerline; however, there are seven private parcels within the Action Area (Segments 2 through 5) where the roadway is a prescriptive right-of-way. The road provides direct access to four private residences, a mountain camp for children, and the residences and businesses within the community of Hyampom. These businesses include vineyards, a motel, several bed and breakfast establishments, an airport, a general store, and other home-based businesses. Also, Hyampom Road is used for mail delivery, school bus service, and emergency service vehicles.

The roadway generally follows Hayfork Creek, crossing the creek once at Nine-Mile Bridge and accommodating several drainages through culverts under the roadway. The terrain is relatively flat leaving Hayfork, but the road quickly climbs and follows a steep ledge in Segments 4 and 5. In some locations, the roadway bench is narrow with near vertical walls (cut slopes) on the one side and steep drop offs on the other. Segment 5 is extremely narrow,

consisting of a single lane which carries two-way traffic. Drainages have carved narrow and steep ravines in the hillside. In these areas, Hyampom Road follows the contours of the terrain, resulting in sharp curves and short sight distances for the driver. There is no posted speed except in Segment 1 near a private school, where it is posted at 40 kilometers per hour (km/h) (25 miles per hour [mph]). Travel speeds vary between 30 to 65 km/h (20 to 45 mph), with slower speeds in the narrow segments and on tight curves. Figure 2 illustrates the six segments of Hyampom Road, of which this study will be addressing Segments 2, 3, 4, and 5. Table 3 provides a summary description of the various segment conditions and physical dimensions for Segments 2, 3, 4, and 5.

TABLE 3
Evaluation and Description of Existing Roadway Segments

| Segment 2 | Segment 3 | Segment 4 | Segment 5 |
|---|---|---|---|
| **Width**<br>• 6.4 to 6.6 m (21 to 22 ft.) | **Width**<br>• 4.9 to 6.8 (16 ft. to 22 ft.) | **Width**<br>• 6.4 to 7.0 m (21 to 23 ft.) | **Width**<br>• 3.1 to 5.5 m (10 to 18 ft.) |
| **Pavement Type**<br>• Asphalt with chip seal finish | **Pavement Type**<br>• Asphalt with chip seal finish | **Pavement Type**<br>• Asphalt with chip seal finish | **Pavement Type**<br>• Asphalt with chip seal finish |
| **Side Slopes**<br>• Steep drop-off along edge of pavement in many areas | **Side Slopes**<br>• Steep drop-off along edge of pavement in many areas (steeper than Segment 2) | **Side Slopes**<br>• Extremely steep drop-off along edge of pavement in many areas (steeper than Segments 2 and 3) | **Side Slopes**<br>• Extremely steep drop-off along edge of pavement in many areas (steeper than Segments 2, 3 and 4) |
| **Shoulders**<br>• Narrow to none<br>• Soft soil | **Shoulders**<br>• Narrow to none<br>• Soft soil<br>• Steep drop off | **Shoulders**<br>• Narrow to none<br>• Soft soil | **Shoulders**<br>• Narrow to none<br>• Near vertical drop-off of 30 m (100 ft.) or more |
| **Pavement Condition**<br>• Alligator cracking<br>• Potholes<br>• Road patches<br>• Slipouts | **Pavement Condition**<br>• Road patches<br>• Slipouts<br>• Areas of edge raveling and erosion<br>• Alligator cracking<br>• Potholes | **Pavement Condition**<br>• Alligator cracking<br>• Potholes<br>• Road patches<br>• Slipouts<br>• Areas of edge raveling and erosion | **Pavement Condition**<br>• Alligator cracking<br>• Potholes<br>• Road patches<br>• Slipouts<br>• Areas of edge raveling and erosion |
| **Prominent Features**<br>• Little Creek Bridge, 8.2-m (27-ft.) clear width, 5.8 m (19 ft.) long | **Prominent Features**<br>• Nine-Mile Bridge, 6.8-m (22-ft.) width, too narrow to meet current design standards | **Prominent Features**<br>• Extended roadway patches<br>• Switchbacks | **Prominent Features**<br>• Single lane roadway<br>• Steep side slopes<br>• Landslide areas<br>• Areas of edge raveling and erosion<br>• Switchbacks |
| **Safety Issues**<br>• Inadequate shoulders<br>• Debris on roadway<br>• Lack of guardrail in crucial areas<br>• Inadequate control of surface water runoff<br>• Roadside hazards adjacent to roadway<br>• Flooding | **Safety Issues**<br>• Inadequate shoulders<br>• Debris on roadway<br>• Inadequate control of surface water runoff<br>• Flooding<br>• Slope failures<br>• Steep cutbanks and embankment slopes<br>• Lack of guardrail in crucial areas<br>• Roadside hazards adjacent to roadway<br>• Short stretches of single lane roadway<br>• Steep dropoff in some areas | **Safety Issues**<br>• Inadequate shoulders<br>• Debris on roadway<br>• Lack of guardrail in crucial areas<br>• Inadequate control of surface water runoff<br>• Roadside hazards adjacent to roadway<br>• Poor sight distance | **Safety Issues**<br>• Narrow single lane roadway<br>• Limited passage of two-way traffic<br>• Inadequate shoulders<br>• Debris on roadway<br>• Lack of guardrail in crucial areas<br>• Inadequate control of surface water runoff<br>• Roadside hazards adjacent to roadway<br>• Poor sight distance<br>• Steep dropoff |

Source: FHWA, 2001

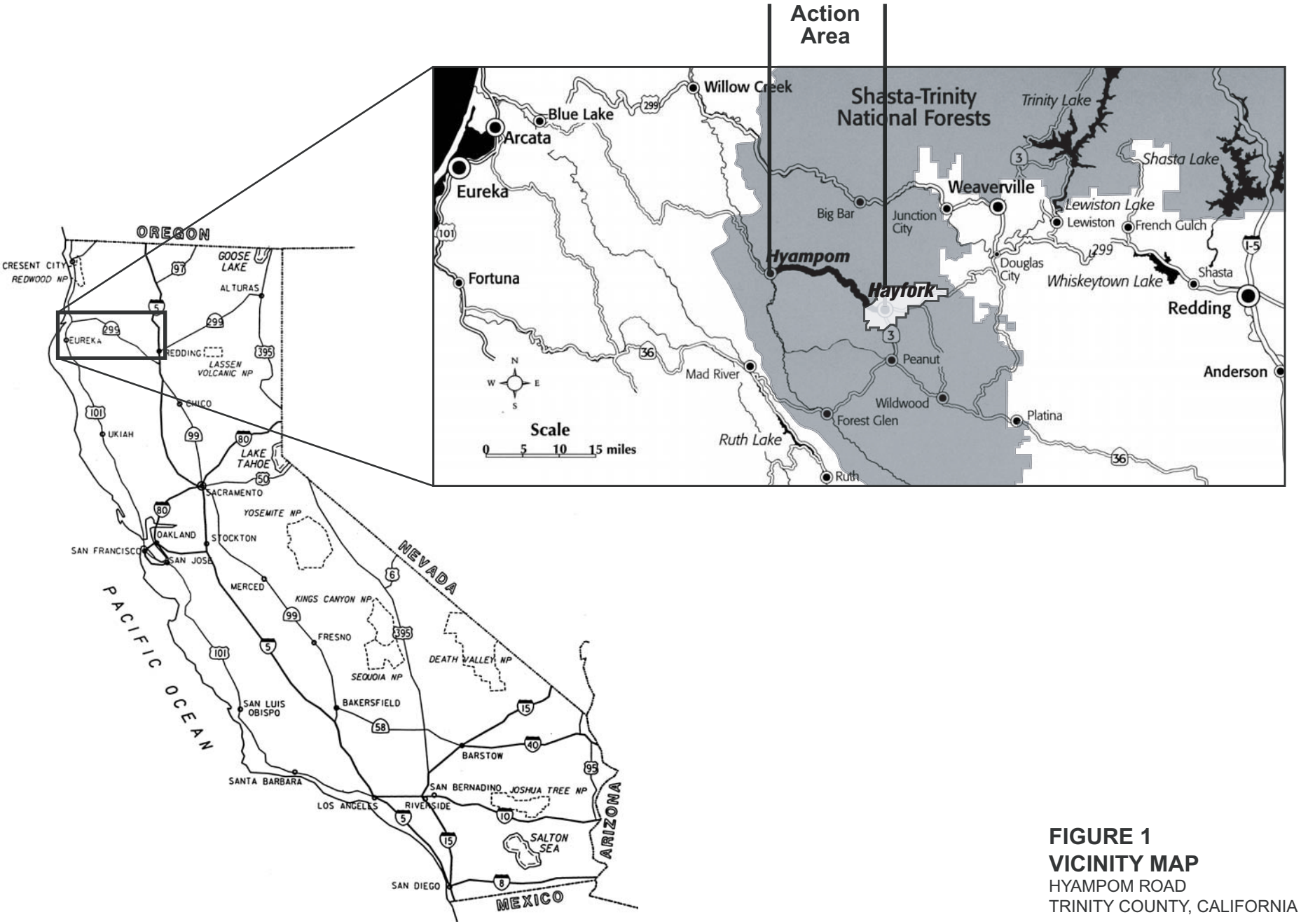


**FIGURE 1**
**VICINITY MAP**
HYAMPOM ROAD
TRINITY COUNTY, CALIFORNIA

CH2MHILL

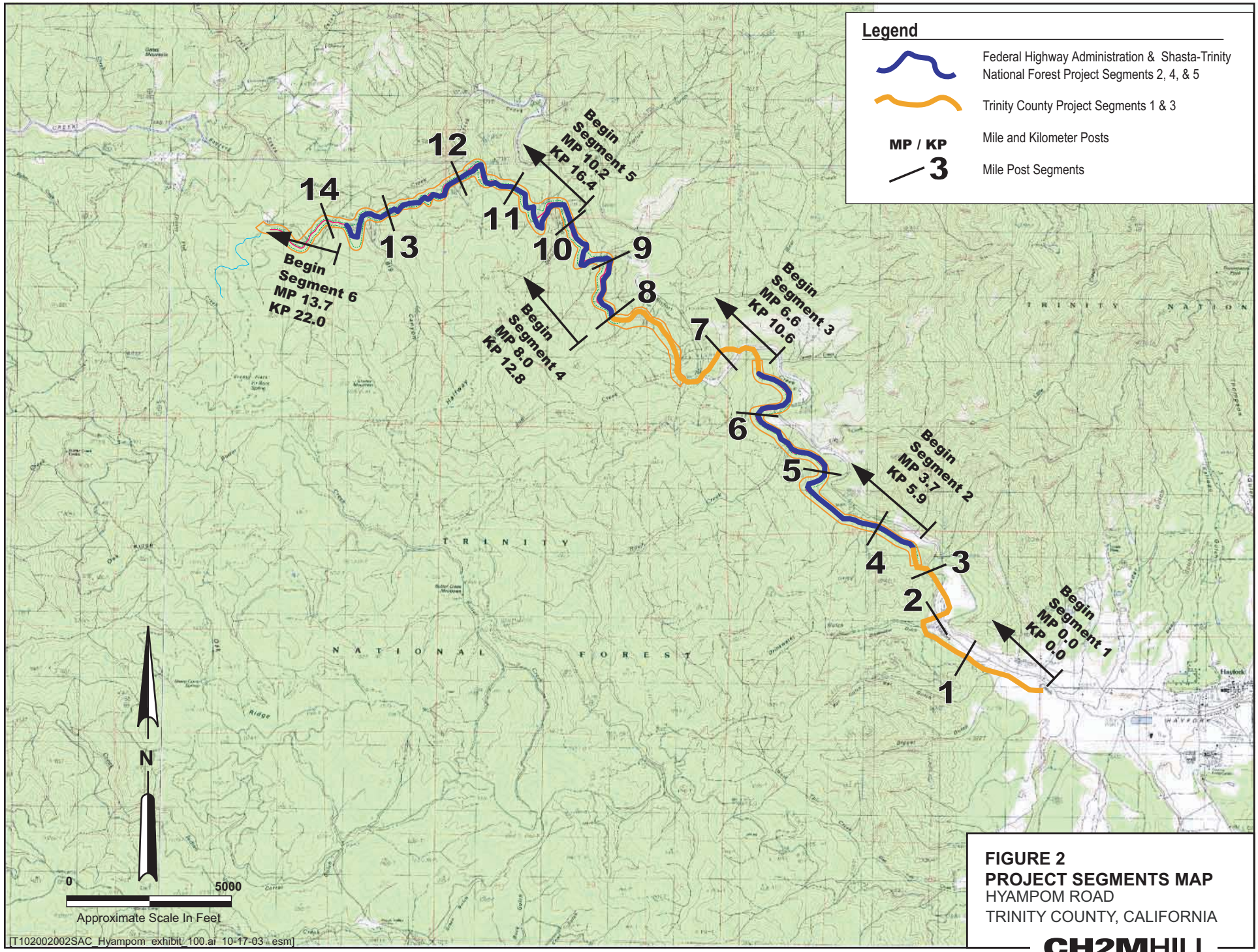


**FIGURE 2**
**PROJECT SEGMENTS MAP**
HYAMPOM ROAD
TRINITY COUNTY, CALIFORNIA

CH2MHILL

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### 1.1.3 Traffic Characteristics

As summarized in Table 4, current traffic volumes on Hyampom Road are relatively low, consistent with the rural nature of the area. Volumes are highest on Segment 1 and then lower (and consistent) throughout the other segments. Historical traffic data from the last 10 years (including field data collected in 2002 and 2005) indicate that traffic volumes are flat (i.e., no growth). However, based on demographics, growth projections, and traffic growth trends on other Trinity County roadways, future development of businesses and modest residential growth in Hyampom is expected to increase future traffic along these segments by about 1 percent per year. With this growth rate, the average daily traffic volumes (ADT) are expected to increase only moderately in the next 20 years.

TABLE 4
Average Daily Traffic Volumes

| Route Segment | Route Segment KP (MP) | 2005 ADT[1] | Construction Year 2008 ADT[2] | Design Year 2028 ADT[2] | Percent Trucks |
|---|---|---|---|---|---|
| 1 | KP 0-5.9 (MP 0 to 3.7) | 929 | 957 | 1168 | 3 |
| 2 | KP 5.9-10.6 (MP 3.7 to 6.6) | 137 | 141 | 172 | 5 |
| 3 | KP 10.6 – 12.8 (MP 6.8 to 8.3)[3] | 137 | 141 | 172 | 5 |
| 4 | KP 12.8 to 16.4 (MP 8.3 to 10.2) | 137 | 141 | 172 | 5 |
| 5 | KP 16.4 to 22.0 (MP 10.2 to 13.7) | 137 | 141 | 172 | 5 |

[1]Source: Trinity County, Federal Highway Administration, and CH2M HILL
[2]Based on an assumed 1 percent growth rate in average annual daily traffic volumes.
[3]In the Trinity County EIR for Segment 3, Segment 3 is identified as running from KP 10.9 to 13.3 (MP 6.8 to 8.3)
KP – Kilometer Post, MP – Milepost, (mileposts for the Proposed Project do not necessarily correlate to the existing roadway mileposts, due to the modifications made to the roadway alignment which creates fluctuations in the roadway length).

An operations analysis suggests that there is an expectation of up to five conflicts between vehicles in the opposite direction during the peak hour for Segment 5. Consequently, while improvements are not needed to improve traffic capacity, there is a need to reduce potential head-on vehicle conflicts and accidents.

### 1.1.4 Social and Economic Conditions

Trinity County encompasses a land area of 8,234 square kilometers (3,179 square miles) and has a population of 13,022 (U.S. Census 1990 and 2000). Hyampom Road is a vital part of the local transportation system serving Trinity County and the STNF. The highway branches from SR 3 in Hayfork, connecting several forest access roads, the community of Hyampom, public roads, and private driveways. Hyampom Road is the only year-round publicly maintained access to the community of Hyampom, including school bus, postal service, and emergency response vehicle access. The USFS uses Hyampom Road to manage the forest resources in the STNF.

### 1.1.5 Forest Resource Management

The majority of Hyampom Road is bordered by the STNF, however, on either end the road is surrounded by private property. Hyampom Road connects with Forest Roads 31N50, 3N01, 3N02, 3N07, 3N22, 3N21, and Butter Creek Meadow.

Two applicable management areas affect Hyampom Road. West of the Nine-Mile Bridge, a steep slope separates the road from the Hayfork Creek. The south side of the road is referred to as the Indian Valley-Butter Creek Area, as defined within the Indian Valley/Rattlesnake Management Area. The management prescription is predominantly "roaded recreation" Level III. To the north of the road (or down slope) is the Hayfork Creek Management Area. Hayfork Creek, from the Nine-Mile Bridge to its confluence with the South Fork Trinity River is being proposed by the USFS for inclusion in the National Wild and Scenic Rivers System.

Applicable management goals and objectives for the Indian Valley-Butter Creek and the Hayfork Creek area include, but are not limited to:

- Roads and trails should be located, designed, constructed, and maintained so that they are compatible with the Roaded Natural Recreation Opportunity Spectrum, permitting hiking, auto-touring, wildlife viewing, off-highway vehicle (OHV) use, cross-country skiing, snowmobiling, and horseback riding.
- Timber management activities should be designed to meet recreation, visual, and ecosystem management areas (2 hectares [5 acres] or less).
- Management of lands should meet Visual Quality Objectives (VQOs) of retention, partial retention, or modification as adopted.

To meet these management goals and objectives, there is a need to make improvements to Hyampom Road to provide better overall access to resources and administration of USFS lands. The improvements would be in conformance with the 1998 STNF *Land and Resource Management Plan* (USDA 1999).

### 1.1.6 Project Development History

Trinity County first initiated improvements to Hyampom Road in the late 1990s. Due to frequent flooding, erosion, loss of roadway width, and other roadway maintenance problems, Trinity County elected to widen and realign Segment 3 of Hyampom Road as well as rehabilitate the Hayfork Nine-Mile Bridge. In 1999, a portion of Trinity County's Statewide Transportation Improvement Program (STIP) funds were programmed for this work.

Subsequently, Trinity County approached the STNF about improving Segments 1, 2, and 5 of Hyampom Road in March 2000. Consequently, a cooperative effort was structured between Trinity County, USFS, and FHWA to consider reconstruction of Segments 1, 2, and 5. In response, FHWA prepared a Reconnaissance and Scoping Report for the three segments in 2000. Based on this evaluation, the agencies decided to add Segment 4 to the cooperative effort to maintain consistent width and design criteria between Segments 3 and 5, which would better meet the drivers' expectations, and therefore improve the safety of the roadway. Through further discussion, the FHWA assumed responsibility for

construction of Segments 2, 4, and 5, and Trinity County assumed responsibility for construction of Segments 1 (with State-only STIP funds, because it primarily serves local Hayfork traffic rather than traffic to or through the forest and is outside the STNF boundaries) and 3 (because funding was already provided in the STIP). Please refer to Chapter 5 of this EA for more information on project scoping and coordination. The significant issues raised by public input to date concern public safety of the existing and proposed road, potential impacts to scenic quality and the character of the roadway, impacts to forest habitat and vegetation, impacts on travel time and accessibility, growth inducement and emergency response. Issues of concern raised by public agencies include the roadway design and avoidance of significant habitat, species of concern, riparian, drainage, and wetland areas.

During the FHWA's Reconnaissance and Scoping process, local agencies, businesses, and state and federal representatives sent letters of support for the Proposed Project. The FHP Agencies officially agreed to proceed with Segments 2, 4, and 5 at a California Public Lands Highway Program meeting in March 2001. The final Reconnaissance and Scoping Report and draft Project Agreement were conceptually approved by Trinity County, the USFS, and the FHWA in August 2001 and the final Project Agreement was signed in 2002. Trinity County has proceeded with CEQA evaluation of Segments 1 and 3 through scoping meetings, mapping, engineering studies, preliminary roadway and bridge design, and environmental studies. A Negative Declaration was completed for Segment 1 in September 2001 and a Final EIR for CEQA was completed for Segment 3 in May 2003. Trinity County faces some uncertainties in their construction schedules for Segments 1 and 3. Currently, Segment 1 is planned to be constructed in 2006, and Segment 3 is planned for the 2007 and 2008 construction seasons. Construction of Segment 5 and portions of Segment 4 have been delayed until 2008 because of recent adjustments in the federal funding schedule. Reconstruction of Segment 2 and the remaining portions of Segment 4 are scheduled to begin in 2010. Recently, FHWA and Trinity County decided to evaluate Segments 2, 3, 4, and 5 in one environmental document (i.e., this EA). An EIR has already been prepared for Segment 3. Trinity County intends to subsequently circulate a separate EIR for Segments 2, 4, and 5 to comply with CEQA requirements.

### 1.1.7 Social, Economic, and Environmental Team

A Social, Economic, and Environmental (SEE) Team was established to assist in the coordination and development of the project. The SEE Team is composed of environmental and engineering staff from the FHWA, USFS, and Trinity County. The function of the SEE Team is to guide the proposal through the project development process and to provide a point of contact within each agency through which other disciplines and individuals can be accessed. The SEE Team members are listed in Section 6.0, List of Preparers.

## 1.2 Purpose and Need

The purpose (objective) of the Proposed Project is to:

- Provide a safe, year round, all weather access to Hyampom

- Provide a consistent-width two-lane roadway alignment to enhance the safety for current and future traffic
- Ensure mobility for emergency response, school buses, postal service, and other delivery vehicles
- Reduce roadway maintenance concerns
- Provide better access for administration of United States Forest Service lands

The proposed project would address four general types of needs: roadway needs, maintenance, safety, and social and economic conditions. These deficiencies are described in the following sections.

### 1.2.1 Roadway Deficiencies

Segments 2, 3, 4, and 5 have safety and operational deficiencies. In some locations, shoulders are missing with steep, drop-off edges that threaten to erode and further undermine the roadway. The roadway currently has inadequate lane width and is less than two full travel lanes in many sections. The road has sharp horizontal curves and areas with a limited sight distance. There is no guardrail in crucial areas. The roadway has too few culverts, many of which are undersized. This concentrates runoff, creating unnecessary erosion and sedimentation into Hayfork Creek. Also, during large storms, the culverts cannot pass large volumes of water and debris, and in many cases will cause water to overtop the roadway. These conditions could lead to the failure of the roadway due to erosion. Other problems include falling rocks and debris on the roadway, and large trees, rock outcrops, and other obstacles immediately adjacent to the roadway. The roadway has inadequate pavement substructure, which has created rough pavement with numerous patches throughout the roadway. Thus, there is a need to provide consistent and wider lanes, better surfacing, improved drainage, and improved geometrics to enhance the safety and maintenance of the existing road.

Segment 2 and parts of Segment 3 are located in the 100-year floodplain for Hayfork Creek and are subject to periodic flooding. Segment 3 is a narrow, winding two-lane road, barely 6 m (20 ft.) wide with narrow dirt shoulders. The road traverses very steep terrain and is confined by steep cut banks on one side and steep embankment slopes on the other that drop down to Hayfork Creek. Slipouts in two areas have further reduced road width to less than two safe lanes, and threaten to erode further. The Hayfork Nine-Mile Bridge, which was constructed by the USFS in 1948, is too narrow to meet current design standards and there is a sharp curve on the western approach. These deficiencies currently pose hazards along Hyampom Road.

Segment 5 is in serious condition and is considered the "missing link" in terms of route continuity between Hayfork and Hyampom. The two-lane roadway becomes a narrow single-lane roadway as narrow as 3 m (10 ft.) wide in some portions, with inadequate shoulders, steep drop-offs, and very few turnouts. The single-lane roadway necessitates alternating one-way traffic operations. Due to short sight distances and lack of intervisible turnouts, there is potential for head-on conflicts between vehicles. There is a need to make this single-lane roadway segment a two-lane roadway to improve safety conditions.

Segment 6, which is not included in the Proposed Project, is 6.3 to 6.6 m (22 to 24 ft) wide, with a few exceptions. The terrain is less severe than Segments 4 and 5, and there are fewer problems with rockfall and erosion of the roadway edges. This segment is also high above the 100-year floodplain for Hayfork Creek. Due to the relatively lower level of roadway deficiencies, Segment 6 was not included in the Proposed Project.

### 1.2.2 Maintenance

Trinity County has maintenance responsibility for Hyampom Road. According to TCDOT, maintenance has been difficult due to deteriorating asphalt, inadequate substructure and drainage, and the need to check the road for debris daily, including weekends and holidays. Even with daily checks, road users must sometimes stop to remove debris from the road in order to proceed. During flood events, the roadway pavement structure along Segments 2 and 3 becomes damaged and contributes to higher maintenance costs. For all segments, roadway sloughing on the outside edge of the roadway and erosion due to inadequate drainage are issues that cannot be solved by routine maintenance. As the edges erode, the shoulders and travel lanes continue to become narrower. There is a need to reconstruct these deteriorated segments to reduce the expense and effort required for future maintenance in these areas.

### 1.2.3 Safety

Safety is a critical issue for Hyampom Road. The inadequate lane and roadway width, lack of turnouts in critical locations, sharp horizontal curves, and debris from eroding slopes adjacent to the roadway are a few of the safety problems facing Hyampom Road users. The roadside is very unforgiving, with little or no recovery area for errant vehicles. Periodic flooding along Segments 2 and 3 is a safety issue because it restricts access during major storm events when emergency access may be critical and air-lift options may not be available. Also, the single lane in Segment 5 and parts of Segment 3 is a safety issue during wildfires in the Hyampom area, when people are evacuating while fire personnel are trying to get to the fire area. Segment 5 is in the most serious condition, with only one narrow lane, thereby increasing the risk for accidents, especially head-on accidents. At one point, the roadway narrows to only 3.0 m (10 ft.) wide. In addition, inconsistent curves, limited sight distance, and steep slopes make travel conditions precarious. Unstable slopes result in gravel or other rock debris on the roadway, and poor drainage results in water flowing over the road. Both of these conditions present driving hazards and add to the deterioration of Hyampom Road.

Due to the ongoing erosion of the edge of the roadway, the road is in danger of becoming less than one lane wide simply due to normal erosion rather than due to catastrophic events. For instance, one section of Segment 5 is only 3 m (10 ft.) wide with no ditch and no shoulders, and with extremely steep slopes above and below. Full-size school buses are between 2.4 and 2.6 m (8 and 8.5 ft.) wide. Even under the current condition, only a minor deviation during driving would cause the school bus to have a tire over the edge of the cliff. The situation is similar for delivery vehicles and logging trucks. As the edge of the roadway continues to erode, the situation will only get worse, leading to a complete closure of the road for an indefinite period, if it were to become too narrow for a single vehicle to pass safely. Closure of the road to conduct repairs could last for several months since it would involve roadway design, cutting (blasting) and filling or construction of retaining walls.

Table 5 describes the accident history on Hyampom Road. While the absolute number of accidents is relatively small, the low traffic volumes on Hyampom Road result in an accident rate of 1.2 accidents per million vehicle miles traveled for Segments 2, 3, 4, and 5. While this is lower than a statewide comparative rate for rural highways (approximately 2 accidents per million vehicle miles traveled per Caltrans' Highway Safety Improvement Program), it is higher than the County average for similar roads (approximately 1 accident per million vehicle miles). It is also important to note that all of the accidents in Segments 2, 4, and 5 involved injuries, including one fatality. Statewide, approximately 55 percent of accidents on rural highways resulted in injuries, so the severity of accidents on Hyampom Road is higher than average. Also, it is likely that many accidents are not reported, and several testimonies during public meetings suggest that many near-accidents have occurred. Comments received during community events indicate that the road conditions deter people from traveling on the road. As road conditions continue to deteriorate, it is likely that the frequency and severity of accidents will increase. There is a clear need to reduce the severity of accidents that occur along these segments.

TABLE 5
Accident Rates (1990-2002)

| Segment | Accidents (1990-2002)[1] | Injuries | Rate[2] | Notes |
|---|---|---|---|---|
| 1 | 9 | 2 of 9 accidents | 0.6 | |
| 2 | 1 | 1 of 1 accidents | 0.6 | |
| 3 | 0 | 0 | 0 | none reported |
| 4 | 2 | 2 of 2 accidents | 2.2 | |
| 5 | 4 | 4 of 4 accidents | 1.3 | 1 fatality |
| 6 | 1 | 1 of 1 accidents | 0.2 | motorcycle |
| All segments | 17 | 10 of 17 accidents | 0.7 | |
| Segments 2, 3, 4, and 5 | 7 | 7 of 7 accidents | 1.2 | |

[1]Source: CH2M HILL 2003b
[2]Units of accidents per million vehicle miles traveled (calculated by CH2M HILL)

### 1.2.4 Social and Economic Considerations

The population of Hyampom is 230 (Saxton 2003). As stated previously, Hyampom Road is the only year-round publicly maintained access to the community of Hyampom, including school bus, postal service, and emergency response vehicle access. Not only does it provide critical access for emergency response, Hyampom Road is also a vital link in maintaining the local economy in Hyampom. This route provides access to recreational and tourist opportunities associated with the South Fork of the Trinity River. Newly established vineyard and winery businesses in Hyampom rely on Hyampom Road for goods and services and transport of agricultural products. Families travel from other parts of California on Hyampom Road to access Bar 717 Ranch, which provides mountain camp experiences for children. In addition, there is an elementary school, a general store, and several home-based businesses that require deliveries via Hyampom Road. The Mountain Valley Unified School District, the Bar 717 Ranch, Meredith Vineyards, and the Hyampom Community Services District have written requests for improving the roadway. To maintain acceptable

access to forest resources and the Hyampom community, there is a need to reconstruct the roadway.